*Advances in Genetic Programming, Volume III*. Edited by Lee Spector, William B. Langdon, Una-May O'Reilly and Peter J. Angeline. MIT Press, Cambridge, MA. (1999). 476 pages. $55.00.
Contents:

Contributors. Acknowledgments. 1. An introduction to the third volume (Lee Spector, William B. Langdon, Una-May O'Reilly and Peter J. Angeline). I. Applications. 2. An automatic software re-engineering tool based on genetic programming (Conor Ryan and Laur Ivan). 3. CAD Surface reconstruction from digitized 3D point data with a genetic programming/evolution strategy hybrid (Robert E. Keller, Wolfgang Banzhaf, Jörn Mehnen and Klaus Weinert). 4. A genetic programming approach for robust language interpretation (Carolyn Penstein Rosé). 5. Time series modeling using genetic programming: An application to rainfall-runoff models (Peter A. Whigham and Peter F. Crapper). 6. Automatic synthesis, placement, and routing of electrical circuits by means of genetic programming (John R. Koza and Forest H. Bennett, III). 7. Quantum computing applications of genetic programming (Lee Spector, Howard Barnum, Herbert J. Bernstein and Nikhil Swamy). II. Theory. 8. The evolution of size and shape (William B. Langdon, Terry Soule, Riccardo Poli and James A. Foster). 9. Fitness distributions: Tools for designing efficient evolutionary computations (Christian Igel and Kumar Chellapilla). 10. Analysis of single-node (building) blocks in genetic programming (Jason M. Daida, Robert R. Bertram, John A. Polito 2 and Stephen A. Stanhope). 11. Rooted-tree schemata in genetic programming (Justinian P. Rosca and Dana H. Ballard). III. Extensions. 12. Efficient evolution of machine code for CISC architectures using instruction blocks and homologous crossover (Peter Nordin, Wolfgang Banzhaf and Frank D. Francone). 13. Sub-machine-code genetic programming (Riccardo Poli and William B. Langdon). 14. The internal reinforcement of evolving algorithms (Astro Teller). 15. Inductive genetic programming with immune network dynamics (Nikolay I. Nikolaev, Hitoshi Iba and Vanio Slavov). 16. A self-tuning mechanism for depth-dependent crossover (Takuya Ito, Hitoshi Iba and Satoshi Sato). 17. Genetic recursive regression for modeling and forecasting real-world chaotic time series (Geum Yong Lee). 18. Co-evolutionary fitness switching: Learning complex collective behaviors using genetic programming (Byoung-Tak Zhang and dong-Yeon Cho). 19. Evolving multiple agents by genetic programming (Hitoshi Iba). Index.

*Particles and Fields*. Edited by Gordon Semenoff and Luc Vinet. Springer-Verlag, New York. (1999). 489 pages. $79.95, DM 158.00, öS 1,154.00, sFr 143.00, GBP 61.00.
Contents:

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*Partial Differential and Integral Equations*. Edited by Heinrich G. W. Begehr, Robert P. Gilbert and Guo-Chun Wen. Kluwer Academic Publishers, Dordrecht. (1999). 369 pages. $168.00, NLG 280.00, GBP 99.00.
Contents:

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